

Kentucky Utilities Company

Report to the Kentucky Public Service Commission

February 2003 Ice Storm Assessment

May 15, 2003

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Executive Summary

The February 2003 Ice Storm was more severe than any winter storm in the Kentucky Commonwealth over the last decade. The freezing rain and ice accumulation in Central Kentucky continued for nearly 36 hours, accumulating more than two inches of ice on wires, electric poles, and trees. The weight of the ice was more than eight times the structural design for the electrical system infrastructure. Widespread and severe damage was caused by the increased weight on poles, wires, and trees. The damage interrupted service to 141,000 Kentucky Utilities and 5,000 Louisville Gas and Electric customers.

Restoration began immediately. Initial restoration focused on critical community organizations and facilities that affected the majority of customers. Assessment of the damage and restoration of electric service accelerated over the first few days as the freezing rain subsided. Over 2,000 people worked to restore service to the majority of customers by week's end. Within one week, all but 9,000 customers had their service restored and over 4,500 miles of electric line were inspected.

The severe nature of the storm raised many concerns. To communicate progress of restoration activities, Kentucky Utilities began twice daily updates with the Kentucky Public Service Commission to address storm damage and restoration progress. Additionally, press briefings, interviews, safety information, television stories, radio programs, and internet updates were provided to update the public on storm issues.

Kentucky Utilities and Louisville Gas and Electric continually strive to improve operations and provide award-winning customer service. Thus, immediately following the restoration a critical review and self-assessment of emergency response activities was undertaken. Several opportunities were identified that could improve operations.

- In the call center, the addition of a Spanish speaking individual would help expedite and clarify communications.
- Customers lack knowledge of their responsibilities to repair customer-owned portions of the electric service. This lack of knowledge created confusion and frustrated customers.
- The need for a computerized outage management system was validated.
- A dedicated individual is needed to meet the needs of our governmental groups.

Kentucky Utilities' response to the storm, restoration efforts, data surrounding the storm and some perceived issues are addressed in the ensuing pages. Overall, Kentucky Utilities and Louisville Gas and Electric repaired the storm damage effectively and efficiently. The storm enabled Kentucky Utilities and Louisville Gas and Electric to identify issues to improve overall restoration response and customer service. To assure continued award-winning service to our valued customers, each issue identified is being addressed.

Background

On Saturday evening, February 15, 2003 and Sunday, February 16, 2003, Lexington, Versailles, Maysville, Paris, Morehead, Mt. Sterling, Winchester, Harrodsburg, Richmond, Danville, Elizabethtown, Earlinton, Pineville, Norton, and Louisville experienced freezing rain and severe weather. Central Kentucky received over two inches of ice accumulation, interrupting electric service to over 141,000 customers of Kentucky Utilities Company (“KU”).

Additionally, 5,000 Louisville Gas and Electric (“LG&E”) customers lost service due to the severe weather conditions. The ensuing restoration effort was unprecedented in Lexington operations history, involving over 2,000 KU, LG&E, and contractor personnel. Freezing rain and severe weather conditions continued over the first thirty-six hours.

Restoration efforts began immediately to focus on critical community organizations and outages that affected the majority of customers. However, freezing rain hindered progress with the initial restoration efforts. Over the next several days, assessment of the damage and restoration of electric service accelerated. Within a week, all but 9,000 KU customers (or 6%) were restored. The final stages of the restoration, including all post-restoration work (e.g. the removal of debris, tree trimming work, and enhancement of “quick fix” restoration work with permanent infrastructure), continued for several weeks.

On March 12, 2003, the Kentucky Public Service Commission (“the Commission”) initiated an informal review and self assessment to be conducted by all utilities in the Commonwealth that were impacted by the storm. The purpose of this report is to address the issues raised by the Commission in its letter (Attachment 1) requesting detailed information regarding the impact of the storm and the response activities of KU to the storm.

KU received many letters, notes, and statements of gratitude from customers for the work performed to restore their service. In general, customers are very appreciative for the long hours and hard work from so many people to assure they have the comfort electricity provides. As an example of the many “Thank You” notes KU received, attached are a letter and signatures from Midway (Attachment 2).

The February 2003 Ice Storm



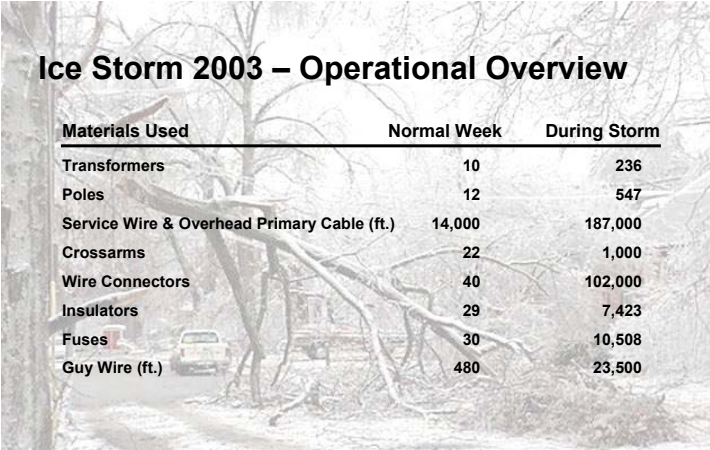
Figure 1 - Ice accumulation in some areas was over two inches.

Thirty-six hours of freezing rain and severe weather conditions created extensive damage to the system infrastructure and limited crew productivity. Some areas had ice accumulations in excess of two inches (see Figure 1) increasing load on structural members to more than eight times their design capability¹. The damage created was extreme when compared to the amount of material consumed during a normal week, as shown in Figure 2 and presented enormous restoration challenges.

¹ Kentucky is in a medium ice loading district (NESC); design standards are for 0.25 inches of ice.

It is useful to put this storm in the appropriate historical perspective. There are 18 storms characterized by the National Weather Service as being an ice, freezing rain, or freezing drizzle storm between January 1, 1990 and December 31, 2002, for the Commonwealth of Kentucky. The average duration of those storms was seven hours. The information for the 2003 ice storm indicates that there were 36 hours of continuous freezing rain, freezing drizzle, or sleet. Consequently, based on the elapsed time of the storm, the February 2003 ice storm was more than five times the average Kentucky Ice Storm.

The average number of Kentucky counties affected by the eighteen storms was 8.25 with an average number of housing units of 109,000 and an average population of 251,000 per storm. The February 2003 storm affected the City of Lexington in Fayette County and seven surrounding counties which contain 213,000 housing units and have a combined population of 497,000 according to the 2000 census. Thus, based upon the number of housing units and population, the February Ice Storm affected twice as many housing units and people as an average ice storm. Ice storms are inherently more damaging than other storms due to their wide-spread nature and extreme damage. Consequently, while twice as many customers were without service, the system suffered three to five times the damage and numbers of customers without service when compared to other types of storms.



Ice Storm 2003 – Operational Overview

Materials Used	Normal Week	During Storm
Transformers	10	236
Poles	12	547
Service Wire & Overhead Primary Cable (ft.)	14,000	187,000
Crossarms	22	1,000
Wire Connectors	40	102,000
Insulators	29	7,423
Fuses	30	10,508
Guy Wire (ft.)	480	23,500

Figure 2 - Extreme damage compared to a normal week.

Restoration Activities

Prioritization of Repairs

KU prioritizes storm restoration based on the combination of critical community organizations such as hospitals, fire, police, etc., and the number of customers out on each circuit. These two independent factors are overlaid upon one another. Those with critical community organizations and the most customers out are ranked highest for service restoration.

Specifically, the Rules and Regulations or Terms and Conditions in KU's tariffs pertaining to Energy Curtailment and Service Restoration Procedures state:

The Company maintains a list of customers with life support equipment and other critical needs for the purpose of curtailments and service restorations. The Company, lacking knowledge of changes that may occur at any time in customer's equipment, operation, and backup resources, does not assume the responsibility of identifying customers with

priority needs. It shall, therefore, be the customer's responsibility to notify the Company if he has critical needs.

The Priority Levels established are:

- I. Essential Health and Safety Uses (including Hospitals, Life Support Equipment, Police Stations and Government Detention Institutions, Fire Stations, Communication Services, Water and Sewage Services, and Transportation & Defense-related Services)
- II. Critical Commercial and Industrial Uses
- III. Residential Use
- IV. Non-critical commercial and industrial use
- V. Non-essential uses (including but not limited to outdoor flood and advertising lighting, show-window and display lighting, parking lot lighting above minimal levels, elevator and escalator use in excess of minimums, etc.)

The Service Restoration Procedure as stated in KU & LG&E's tariff approved by the Commission stipulates:

Where practical, priority uses will be considered in restoring service and service will be restored in the order I through V as defined under Priority Levels. However, because of the varied and unpredictable circumstances which may exist or precipitate outages, it may be necessary to balance specific individual needs with infrastructure needs that affect a larger population. When practical, the Company will attempt to provide estimates of repair times to aid customers in assessing the need for alternative power sources and temporary relocations.

Restoration Resource Timeline

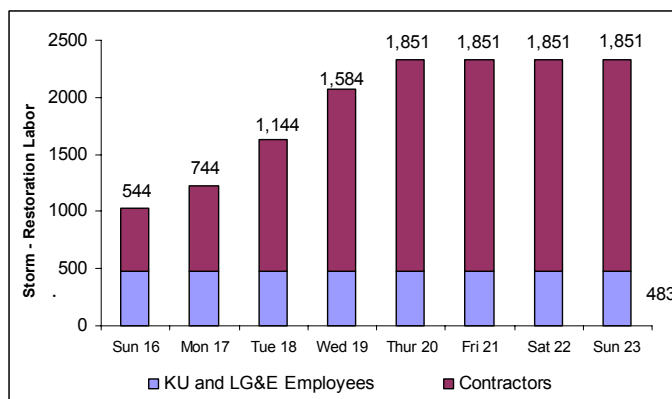


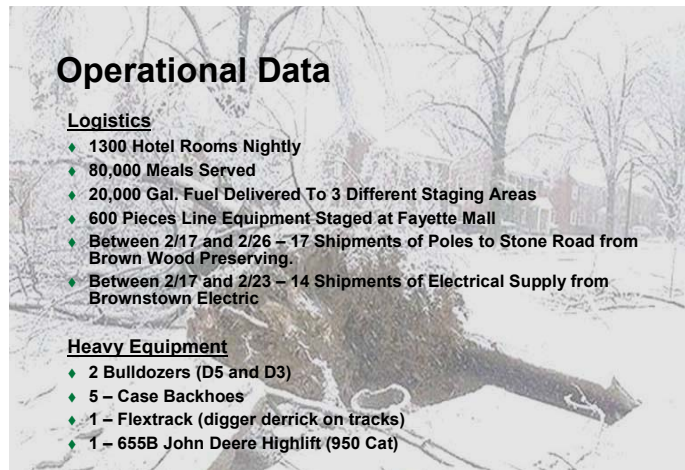
Figure 3 - Timeline showing number of employees participating in the restoration.

Figure 3 shows the number of employees and contractors responding to the restoration work for each day of the storm and subsequent restoration period. KU and LG&E had 483 employees working as linemen, support personnel, tree trimmers, safety, contract coordinators, communicators, coordinators, and logistics to provide restoration of the electrical system.

KU is a member of Edison Electric Institute (EEI) Mutual Aid Organization. The Mutual Aid Organization was

established so utilities can help each other with storm restorations by providing skilled workers familiar with electrical system characteristics to restore structural damage. Each of these contract and mutual aid crews is experienced and trained in utility operations. Consequently, each crew is highly effective at providing restoration service. The experience of the crews is evident by the

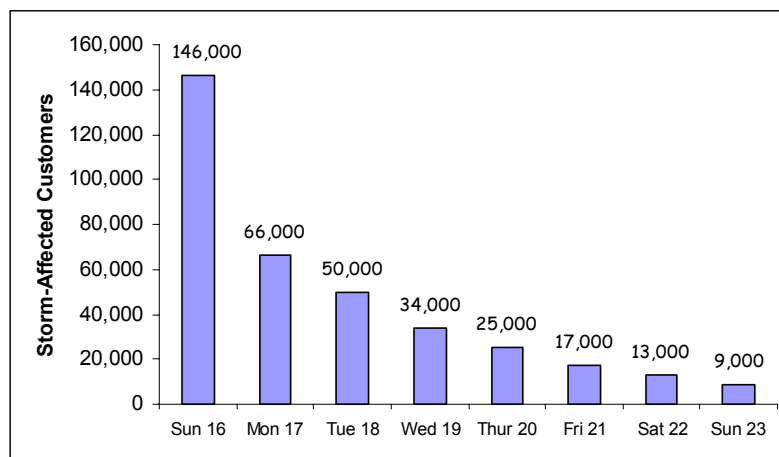
outstanding safety record for both Company and contractor crews during the entire storm: only one recordable incident occurred with the Company crews and the contractors had only five injuries. The ability to get knowledgeable and skilled utility workers from outside of a storm-affected zone to assist with restoration efforts is what makes the Mutual Aid Organization work. Each utility from the regional area may elect to release their employees or contractors to assist another utility with restoration efforts during emergencies.



KU called on other regional utilities within the Mutual Aid Organization to assist with the February 2003 ice storm restoration work. Utilities responded by releasing 1,851 contract employees to supplement the 483 KU/LG&E employees. A combined work force of 2,334 people repaired the damage and provided for the logistics and equipment shown in Figure 4.

Figure 4 - February 2003 Ice Storm Operational Data

Impact on Customers



A total of 146,000 customers² were without service due to the damage created during the February 2003 ice storm. Within one week all but 9,000 customers had service restored. Figure 5 is a timeline showing the number of customers without service at 24-hour intervals for the KU service area; 12-hour data was not collected and is not available.

Figure 5 - Number of customers out per day due to storm damage.

Customer Hours Out and Expenditures

The 146,000 customers had service interrupted by the ice storm for an estimated eight million hours or an average of about 55 hours per customer. The cost of the storm is estimated to be

² 141,000 KU customers and 5,000 LG&E customers.

\$22.5 million dollars. When this cost is divided by the almost eight million hours of customer outages, the KU expenditures per customer-hour-out are about \$2.83.

Call Center Operations

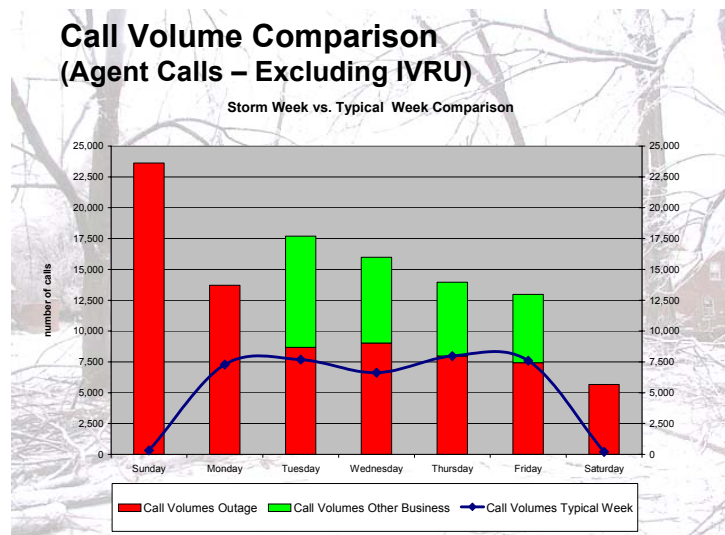


Figure 6 - Call center call volumes.

The KU and LG&E call centers operate together as a single virtual call center. The three call center locations in Lexington, Pineville, and Louisville were connected in 2001 so that calls can be answered by representatives in any location. Technology enables all three of these call centers to operate as if they were located in one physical location. The ability to operate separate geographical locations as one physical location is referred to as a virtual call center.

The call center is always prepared for storms and other outage situations. There is an on-call supervisor assigned each week, and there are eight primary

and six secondary call center representatives “on-call” who are summoned via pager to respond to storm situations. In the event of a major outage, additional representatives are summoned as needed and rotate in 12-hour shifts until call volumes/callbacks can be managed with normal staffing levels.

Beginning February 15 and throughout the next week, the call center received almost three times as many calls as in a typical week. On Sunday, the 50,000 calls received, including those taken by the Integrated Voice Response Unit (“IVRU”), constituted the highest one-day-call volume in KU or LG&E’s history. Figure 6 shows that the number of outage related calls received on Sunday was almost equal to the number of calls received during a normal week. The coordination and assistance from several departments, who sent volunteers to work in the call centers during the storm, allowed us to handle the increased call volumes. Customer Accounting, Revenue Collections, Revenue Protection, Walk-In Centers, Field Services, and Environmental Compliance all provided extra staff on the phones to answer customer calls. The supplemental staffing provided a total of over 150 people to handle the increased call volume and answer customer questions. Figure 7 shows the results of gaining these supplemental staffing and reducing the time customers had to wait to speak with a customer service representative. As the week progressed, and some customers remained without power, the time spent on each call grew longer as representatives took time to explain the restoration efforts, crew locations, etc. The extended average call handling time resulted in a slight increase in the Average Speed of Answer at the end of the week.

Customers calling to report an outage can choose to use the IVRU or speak directly with a representative. If the IVRU call queue is filled, then these overflow calls are transferred to 21st Century. 21st Century is a third-party provider who maintains an exact replica of our IVRU. Calls flow to them when our normal capacity is full to help ensure that customers can report an outage without undue delay.

During major outages, the call center designates a manager to be the primary point of contact with the electric trouble command center to observe, monitor, and relay to the call center any relevant information regarding the outage and restoration efforts (locations, severity, areas of focus, etc.). These updates are coordinated with the Corporate Communications representative working the storm and the distribution operations manager.

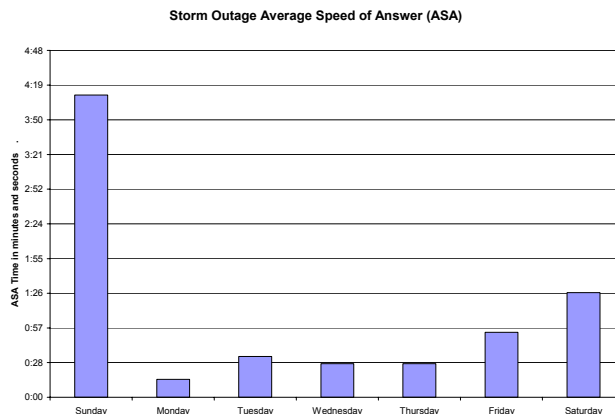


Figure 7 - Average Speed of Answer

To enable callers to obtain information about the outage and restoration efforts, call center managers record a 30-second “front end” message that callers hear when calling about an outage. This information is updated regularly and is designed to let callers know where outages are located, what actions are under way, and, if feasible, an estimated restoration time. This satisfies many callers’ need for information and reduces the number who choose to hold on the line to speak with a representative.

An internal Customer Service Help System (“RoboInfo”) was very beneficial during the storm. Customer service representatives used the "Lexington Ice Storm Information" page, the "KU Billing Issues from Ice Storm" page, the "Generator Safety" page, and the search engine to provide customers with current information about storm issues. Additionally, the Customer Service intranet site "Policies and Procedures" pages kept representatives up-to-date about a number of safety issues and provided a central location for exchanging information on Outage Reporting updates, particularly involving inspections for Lexington customers. These tools assured that customers received accurate and up-to-date information on storm issues.

Computerized Outage Tracking/Response

Energy Delivery currently has separate information technology (“IT”) systems supporting KU and LG&E outage tracking/response operations. These systems are a mix of highly customized purchased systems and internally developed systems. None of these systems is considered sufficient to independently support industry best practices in its current form.

The GEMINI project has been established to develop a single Geospatial Information System (GIS), Work Management System (WMS), and Outage Management System (OMS) to support

both LG&E and KU operations. Best of breed software is being implemented with as little customization as possible to establish scalable, transferable systems that support consistent use of industry best practices throughout the KU and LG&E service territories. Investment of approximately \$30 million was approved for the GEMINI project in April 2001. GEMINI will be complete in late 2004.

LG&E and KU are in the testing stages of the new outage management system called Centricity. When the software is accepted, the GEMINI team will begin in the translation of the KU Geographic Information System Data, Smallworld, into Centricity and then conduct a KU pilot no later than early summer 2003. Upon successful completion of the pilot, the Centricity application will be implemented in the fourth quarter of 2003 for KU. Once deployed, a centralized dispatching responsibility for the entire KU service territory will be established. Centricity is expected to be deployed to the LG&E operations in 2004.

Material and Supply Availability

The magnitude of the storm and the subsequent restoration posed many challenges to the established supply chain process. Distribution Supply Chain personnel are aligned with the Distribution Business and operate in a centralized Supply Chain organization to support distribution across the state from both Lexington and Louisville.

The existing supply chain structure proved effective throughout the restoration as Louisville-based personnel were mobilized to both the Stone Road and Midway operations centers to manage mobilization of out-of-state contractors, laundry, miscellaneous equipment, lodging and meal needs. Two strategic suppliers delivered (as necessary) required materials and staffed the respective storerooms on a 24-hour basis. No material interruptions were incurred at any time during the restoration.

Distribution Supply Chain helped mobilize approximately 1,800 contractors for the restoration work. An advantage of a variable workforce and strategic relationships with key suppliers is the ability to obtain over 500 line technicians on the first day. Many of the contractors were from out of state and from companies having no prior work experience with KU/LG&E. Many of the contractors had to be certified and required contracts. There were no material interruptions during the restoration work. However, some materials had to be urgently shipped from strategic suppliers based on the mobilization of contractors and assessments of storm damage. A variety of non-operating, administrative functions had to be intensively managed throughout the event. Management of the IT, telecommunications, risk management, cash management, and supply chain activities allowed operations management personnel to concentrate on the primary objective of repairing the storm damage and restoring service.

Tree Trimming

The tree trimming goal is to trim for a 3.5 year clearance. The cycle last year was 3.96 years. The tree trimming procedures are sound. They balance the need for trimming (i.e. reliability of the electric system) with both aesthetics and impact on customer cost.

The need for trimming varies by weather, by growing season, species of tree, the extent of previous trimming, and geographical location. With regard to distribution right-of-way clearing, the goal, based on experience in the KU service territory, is to trim on an overall average of 3.5 year cycle. Most 12 KV urban areas are trimmed after three growing seasons. Some 4 KV line areas are allowed to grow for four years. Rural areas average four to five year cycles due to increased opportunity for complete removal of trees, which provides for increased ground to sky clearance.

Reliability-centered maintenance concepts are also employed in establishing tree trimming priorities. This means that circuits with a history of vegetation-related outages are reviewed and/or trimmed with greater frequency than those with no such historical trends.

For this storm, tree trimming practices had little, if anything, to do with the extent of the damage experienced in the service territory. The damage was a direct result of the inordinate ice loading, which exceeded design loadings up to eight times. Some lines were pulled down by the weight of ice directly on the lines; others were damaged when poles or trees snapped under the tremendous weight of the ice. In many instances, trees were entirely uprooted as a result of the heavy ice and saturated soil. When trees are entirely uprooted, tree trimming cannot reduce the potential for damage.

The forestry staff did an excellent job during the storm. The number of tree crews active in the field was optimal, as evidenced by the fact that field crews rarely, if ever, had to wait for the tree crews to arrive. This expedited crew efficiency and repair time.

Post Restoration Work

The work undertaken after the restoration effort was completed can be categorized and summarized as follows:

Tree Trimming:

- Nine 5-man crews worked a full week in Lexington following the storm.
- Additional trimming was completed in Winchester, Shelbyville, Richmond, and Paris.
- The normal tree staff of 12 crews worked exclusively on storm-related customer-reported tree problems for two weeks following the storm.
- Three contractor pickup trucks were added to respond to individual customer calls to clear or recommend for crews to expedite orders.
- Heightened customer requests for tree removal or trimming are expected for several months and will continue into summer.

Construction:

Lexington:

- Contractor resources were retained (approximately 50 linemen) throughout the week of February 23 to repair damaged services and infrastructure.

- Post-storm work packages were developed to replace temporary repairs with permanent repairs. This work was completed within a few weeks following the storm. Contractor resources were retained to supplement normal staffing to complete work.
- 2-4 additional contractor crews were maintained throughout March to focus on post-storm restoration.
- 2,207 inspections received, processed and reconnected through April 4 for customer service repairs due to ice storm damage.

Maysville/Paris:

- For two weeks following the storm, normal staff was focused solely on post-storm restoration.
- Two contract crews were added to the Paris work force for one week following the ice storm. These crews focused on customer service reconnections.

Property Restoration:

- Responded to customer property repairs with local landscape contractors.
- Risk management reviewing and managing customer home and equipment damages.

Communication and Coordination Activities

Prior to, during, and following the historic ice storm that hit Central Kentucky in February 2003, KU and LG&E Energy conducted an aggressive, multi-faceted communications effort targeted at the customers, public, local Emergency Operations Center, local government officials, Public Service Commission, and other key audiences.

The communications effort was based on a comprehensive storm and restoration plan which is reviewed, updated, and verified by communication leadership and the Company's senior management. Like the Distribution Operations effort, the emergency communications plan was initiated prior to the storm.

By 4:00 a.m. on Sunday, February 16, it became evident that the level of damage expected in central Kentucky was significant. KU communications staff initiated contact with the Lexington Mayor and with the Emergency Operations Center (EOC).

During the ensuing 10 days, Company representatives:

- Coordinated inspections on over 2,100 electrical services and over 4,500 miles of electric lines on more than 209 circuits;
- Conducted twice daily update briefings with the Commission on storm damage and restoration progress;
- Conducted 20 press briefings (which GTV-Channel 3 archived on videotape);
- Provided interviews, safety, and restoration information for more than 500 television stories and more than 100 newspaper stories;
- Aggressively participated in radio and television call-in shows to provide accurate and timely information;

- Posted critical information on the Company's web site;
- Conducted ride-alongs with work crews for media, the Commission members, and local and federal government officials;
- Provided dedicated communications liaison for governmental officials;
- Coordinated with Lexington in handing out safety fliers;
- Provided up-to-date safety and restoration information to the Company's call center representatives to share with customers.

Lessons Learned

KU/LG&E immediately performed a self-assessment of the storm response and restoration. The Companies continually strive to improve their operations. A critical review of emergency response activities was undertaken, and the following actions were identified for improving the preparedness and/or effectiveness of the Company for system emergencies.

In the call center, KU learned that a Spanish translator is needed to improve communications with our Spanish-speaking customers. Currently, KU has very limited resources for emergency translations and our Spanish-speaking population is growing rapidly. Additionally, KU learned that the storm's impact on phone and fiber lines utilized by the call center exposed several areas that need enhanced contingency systems. Due to these capacity and routing problems, some customers had to call two to three times to get through.

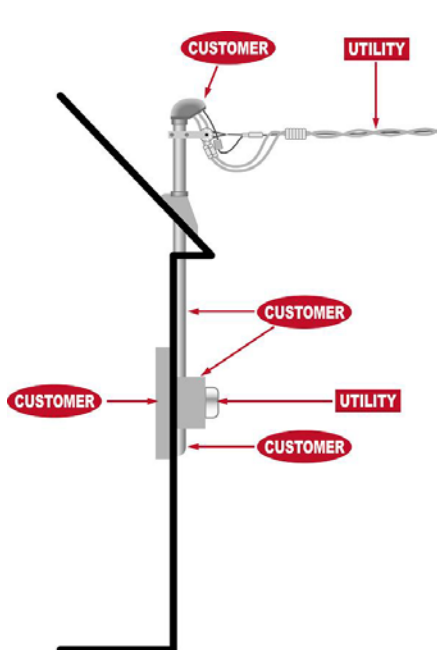


Figure 8 - Electric Service Responsibility

Additionally, KU learned that customers generally do not understand where KU's responsibility ends and theirs begins, see Figure 8. For example, some customers were awaiting service restoration only to find out that they needed to contact a contractor to repair the service and/or meter to their house before restoration could be completed. Likewise, it is extremely important for customers calling in outages to let the Company know if damage has occurred to the service entering their home. Communicating customer service damage enables the Company to take some extra precautions upon restoring service to assure everyone's safety. Improving customer education about their responsibility will help KU restore power safely and decrease customer frustration.

Managing logistics for people and equipment is a full-time task with a major storm. KU recognized the need for a centrally aggregated and managed approach to these activities. The management of logistics should be in a designated area at each specific site for Operations in future restoration events. Consequently, plans are being updated to include this approach for future major storm restoration efforts.

Through the February 2003 ice storm, KU validated its need for a computerized Outage Management System. Since 2000, KU has worked on an active program to develop, implement and replace existing legacy systems. This new computerized system will provide the ability to better manage storm resources to provide service restoration in a timely manner that customers have come to expect.

KU determined that a dedicated person is needed to improve relations with governmental groups to improve information flow and data reporting by understanding their data/reporting needs. A dedicated person has been assigned to the KU areas to ensure that the needs of governmental groups are met.

Some media and public officials identified several issues as having a perceived impact on the effectiveness of the KU response to the February 2003 ice storm. These issues were raised in various venues, such as the print media, public meetings, and/or discussions with public officials. The issues include the tree-trimming practices, foreign ownership, variable workforce, and underground vs. overhead lines.

Tree-trimming practices did not adversely impact the effectiveness of the restoration efforts. Ice loading was so extensive that entire trees were uprooted in many locations. The magnitude of this storm and the extent of the severe weather were such that any increased tree trimming would have had no measurable effect on the extent of the damage caused by this storm.

Some questioned the fact that KU is a subsidiary of E.ON, a German utility, and the effect foreign ownership had on restoration efforts. The foreign ownership of KU had no negative effects on the restoration effort. This restoration effort was directed by Kentuckians for Kentuckians, primarily out of KU's Stone Road and Midway facilities and the customer call centers in Lexington, Louisville and Pineville. Senior executive management was in Lexington to assist with restoration and communications for the duration of the storm. E.ON supported the efforts of KU & LG&E management to repair and restore the system quickly and effectively.

The KU/LG&E move to a variable work force did not adversely impact the effectiveness of the restoration effort. In fact, the use of contractors and the implementation of an emergency response plan that utilizes them enabled KU to respond to the storm quickly and effectively while helping to maintain KU's low electric rates for customers. KU called on over 1,800 contractors to supplement their existing work force. The existing work force was used to coordinate contractor crews, assure safety, and effectively restore the system. The flexibility provided by having strong strategic suppliers enabled KU to ramp up and perform restoration work efficiently.

Some questioned whether it would be prudent for KU to move the electric distribution system from overhead lines to underground lines, to mitigate the risk of outages during this type of storm. It is impractical and financially prohibitive for KU to plan to move an entire distribution system underground simply to minimize the risk of outages due to trees and ice loading.

A program for moving any portion of the distribution system from overhead to underground lines would require an extensive cost/benefit analysis. The cost of moving infrastructure must be

weighed against the quantified risk of incurring costs to restore the system – a system that might otherwise have remained intact had it been placed underground. A joint effort with telecommunications and TV cable companies would be required to remove overhead utility infrastructure.

The normal procedure is to maintain and upgrade, when required, overhead residential services at no cost to the customer. A charge is incurred by our customers when rewiring from overhead to underground, when the existing overhead service is deemed satisfactory for the customer's load. This minimizes yearly capital investment costs.

However, a program might be implemented that would at least address a specific portion of the distribution system. That portion is the overhead services to residential customers. Residential customers may be encouraged to rewire overhead or build new services as underground service at their cost. For the customer, building a new service underground is at an incremental cost that may provide less maintenance, better aesthetics, and better reliability. This program, over time, (1) reduces labor hours spent on identifying downed service wires, (2) reduces labor hours spent standing by energized service wires, and (3) allows crews to focus on downed primary and secondary conductors, which improves the efficiency of the overall restoration by eliminating the need to either reconnect services pulled from houses or repair broken service neutrals.

Finally, placing infrastructure underground does not eliminate the possibility of equipment damage or an outage. In fact, underground service is interrupted by digging.

Conclusion

The February 2003 Ice Storm was more severe than any winter storm in the Commonwealth. The freezing rain and ice accumulation in Central Kentucky continued for nearly thirty-six hours and caused the interruption of electric service to over 141,000 KU customers and 5,000 LG&E customers. The duration of the storm, number of customers affected, and extent of damage to the electric system far exceeded that of the winter storms in Kentucky in the last decade.

The ensuing restoration effort was also unprecedented in Lexington operations history. Restoration efforts began immediately. The initial focus was on the restoration of critical community organizations and facilities that affected the majority of customers. Assessment of the damage and restoration of electric service accelerated over the first few days as the freezing rain subsided. The resources working the restoration ramped up rapidly as well, with over 2,000 KU, LG&E, and contractor crews participating in the restoration effort by week's end. Within a week, all but 9,000 KU customers were restored. The final stages of the restoration, including all post-restoration work, continued for several weeks.

Although the Companies' response to the storm was immediate and effective, the Companies continually strive to improve operations. A critical review and self-assessment of emergency response activities was undertaken, and several action items were identified for improving the preparedness and/or effectiveness of the Companies for system emergencies. Each of the issues is being addressed to assure continued award-winning customer service to our valued KU and LG&E customers.

GLOSSARY

4 KV – This term is used to refer to electric distribution lines that carry 4,160 volts of electricity to customers.

12 KV – This term is used to refer to electric distribution lines that carry 12,470 volts of electricity to customers.

21st Century – A contractor who has equipment and resources to assist answering customer outage calls when volumes saturate the KU and LG&E systems.

ASA – Average Speed of Answer: A measure routinely used in call centers to measure the time a customer must spend waiting to get to speak with a customer service representative.

Centricity – A vendor's program that provides work management capabilities; see WMS below.

GEMINI – The name of a major project to integrate three separate computer applications into one system for mapping, work management, and outage management.

GIS – Geospatial Information System: A computer program that manages geographical data such as roads, distribution lines, gas lines, etc.; a mapping system.

IVRU – Integrated Voice Response Unit: A computer system that answers incoming calls, provides customers with menu options to either answer their questions or route their call to the appropriate person.

OMS – Outage Management System: A computer system that provides work management and dispatch functions during a storm.

Reliability – Centered Maintenance: An industry method of using data and information to prioritize maintenance work.

Smallworld – A vendor's program that manages geospatial information; see GIS above.

Virtual Call Center – The use of technology to operate separate geographical locations as one physical integrated phone center.

WMS – Work Management System: A computer program that keeps track of work, personnel, and equipment to enable effective and efficient use of labor.

Attachments

Kentucky Public Service Commission Staff Letter, March 12, 2003



Paul E. Patton, Governor

**Janie A. Miller, Secretary
Public Protection and
Regulation Cabinet**

**Thomas M. Dorman
Executive Director
Public Service Commission**

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(502) 564-3940
Fax (502) 564-1582

**Martin J. Huelsmann
Chairman**

**Gary W. Gillis
Vice Chairman**

**Robert E. Spurlin
Commissioner**

March 12, 2003

Mr. Victor A. Staffieri, President
Kentucky Utilities Company
c/o Louisville Gas & Electric Co.
P. O. Box 32010
Louisville, KY 40232

Re: February 16, 2003 Ice Storm Restoration Assessment

Dear Mr. Staffieri:

By this letter, the Kentucky Public Service Commission requests an assessment by Kentucky Utilities of its efforts to restore power to its customers who lost service due to the ice storm of February 15-16. The Commission is requesting this of all jurisdictional utilities that suffered significant outages due to the storm. A written report of the assessment should be submitted to the Commission no later than May 15, 2003.

It is the Commission's intent to use this assessment to identify practices that worked well and also those that might be improved upon. The lessons learned will hopefully improve the response to future events. Below is a list of issues that should be included in the report as a minimum.

- Initial evaluation/assessment of damage
- Prioritization of repairs
- A timeline, scaled at increments no greater than 24 hours, of the number of employees and heavy equipment participating in the restoration. Employees should be categorized by classification and employer
- A timeline showing the number of customers without service at increments no greater than 12 hours
- Availability and effectiveness of contract crews and/or mutual aid crews



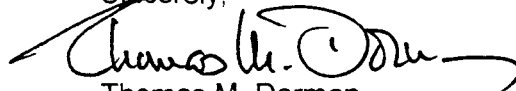
- Operational coordination between KU and contractors, volunteers and governmental agencies
- Availability of material and supplies
- Tree trimming practices and history (clear-cut, trim, time between cycles, etc.)
- Consumer hours out and KU expenditures per consumer hour out
- Call Center operations (IVR, contract call center, daily average response time per call, etc.)
- Outage tracking/response software used; to what extent
- Communications with customers, media, public officials, governmental agencies, PSC
- Coordination of efforts with the Division of Emergency Management and other local emergency management officials
- Plans for post restoration cleanup and outside facility inspections
- What service/support could the PSC offer that would be of assistance

Other factors that you deem useful in evaluating the outage and restoration process should also be included in your assessment.

You should include a discussion of changes that should be made in KU's response procedures and how the changes will be made. Once the Commission staff has received your assessment, staff may follow up by requesting additional information or clarification. Staff will also send a copy of the assessment to the local elected officials and Emergency Management personnel in the impacted areas requesting comments, and will place the assessment on the PSC web site. After receipt of the additional information and comments, a staff report will be developed for the Commission.

If you have any questions concerning this assessment, please contact Robert A. Amato, Director, Engineering Division, at 502-564-3940.

Sincerely,


Thomas M. Dorman
Executive Director

TMD:RAA:jep

C: George Siemens
Michael Beer

Midway, Thank You Letter and Signatures

CITY OF MIDWAY

P.O. BOX 4275
MIDWAY, KENTUCKY 40347-4275

Mayor Becky Moore

859-846-4413 City Hall
859-846-4940 Home
859-846-4237 Work

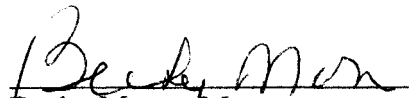
March 26, 2003

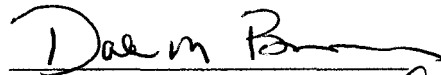
LG & E Energy
Greg Thomas
One Quality Street
Lexington, KY 40507


Dear Greg:

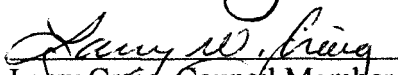
We want to express our thanks and gratitude for all your help during the ice storm. Your hard work and dedication is truly appreciated by us.

Sincerely ,



Becky Moore, Mayor


Dale Benson, Council Member


Tom Bozarth, Council Member


Larry Craig, Council Member


Doug Farmer, Council Member


Tony Moreno, Council Member


Jean Sharon, Council Member

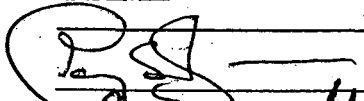


THANK YOU!

MIDWAY THANKS YOU!

NAME

ADDRESS

	116 Northwinter St Midway
Brenda Shearer	114 Chestnut Versailles
Mary Dwayne Grabbard	313 N. Winter St. Midway Ky
Patricia Dind Borg	121 N. Broad St. #10 Midway
Mindy Smith	1st St Midway Ky 40347
Rita Fitts	Old Towne Walk Midway Ky
Arnold Hertz	326 Duckers Rd. Midway Ky
Danella Long	323 Hertz St Midway, Ky
Verna Mason	109 1/2 Highview Midway Ky
Tom Harvey	349 North Ridge
Mr. & Mrs. Glenn Walz	B1 Old Frankfort Pk. Ky
David Lucas	Spring station PK
Stacy Spurr	Higgins st.
Chris Taylor	123 copper field Ln.
Ann Kessinger	246 N. Winter St
Elizabeth Stum	323 S Turner St.
Kl S. Vanzenet	323 S. Turner St.



MIDWAY THANKS YOU!

NAME	ADDRESS
Phyllis Allen	PO Box 4521 Midway, Ky 40347
Margay Farm LLC	P.O. Box 4220 Midway, KY
Clinton Jan Rush	2248 Old Frankfort Pike 40387
Alice Wright	449 DAVISTOWN RD Midway Ky.
Chad Metzger	3965 Old Frankfort Midway
Delbert Leonard	109 Ardthurd Geo, Ky.
Laura Gray	P.O. Box 3908 Midway, KY 40347
Patty Ruby	433 Davistown Rd. Midway, Ky
Betty Bright	- 301- Turner Midway
Cordelia Adams	- 129 Old Towne Walk
Jackie Jones	P.O. Box 4401, Midway, Ky 40347
Heroldine Woodrum	Box 82 Midway Ky, 40347
Mavis Yeary	Box 351 Midway Ky 40347
Charles Logan	110 E. Higgins, Midway Ky
Scott and Julie Crockett	114 1/2 East Bowen St. Midway

 **THANK
YOU!****MIDWAY THANKS YOU!**

NAME

ADDRESS

Heather Meyers P.O. Box 13091 Lex. KY

Judy Devers P.O. Box 4153 Midway

William D Fishback Jr 595 Pisgah Versailles

Jenny Hardy 2200 Richmond Rd

St M

Claydon Brown

CHARLIE DOUGLAS

4858 W Keestown, Midway, Ky.

Roberta House 224 W Stephens Midway, Ky

Ellis Mason 109 1/2 HIGHVIEW DR.

Judi Benson 219 Turner

Alice Wright 449 Parktown Rd Midway

Mark R. Boone 227 W CROSS ST

Cora S. Broger P.O. Box 4011 Midway Ky 40347

B. McCall Midway

Dorothy Oline 403 Merrywood

Nancy Downing Box 501 Midway Ky 40347



THANK YOU!

MIDWAY THANKS YOU!

NAME	ADDRESS
Rebecca Columbia	108 W Main St Midway Ky
Penny Wilson	129 D Winter St Midway Ky
Robbie Toomey	Versailles Ky
Catherine Bernabe	129 N Winter St Apt Midway Ky
Will Clark	217 Gayland Dr.
Vincent Price	206 Gayland Dr.
Mary Blaydes	1938 W. Leostown Midway
Maria Ratliff	217 West Stephens St. Midway
Catherine Comer	241 W. High
Jan Ramos	Midway Ky.
Casey Mike Trent	Georgetown Ky
Aunt Don Bazzett	Midway Ky
Arlene Dejeus	644 morse rd
Deana Fager	246 W. Stephens St.
Ann Langhelt	246 W. Stephens St
Margaret Ware Parrish	Midway
Hershel & Sara Wiley	Midway



MIDWAY THANKS YOU!

NAME	ADDRESS
Temperance Eudicott	Box 125 Midway, Ky 40347
F. Allen	39 Circle Dr
Melissa Vaughn	131 Carriage Lane Midway Ky 40347
Vicki Riddle	665 Georgetown Rd. Midway Ky 40347
Carole Vaughn	115 Highway Dr. Midway, Ky 40347
Melinda Boring	
Lucy Duncan	3485 Midway Rd.
Susan Valle	116 Cottage Garden Ln.
Paul Blackaby	PO Box 3996 Midway Ky 40347
Sharon Turner	113 E Higgins Midway Ky 40347
Remy Khan	
Mary Kay Woodrum	100 Carriage L. Midway Ky.
Maria Spencer	326 Second St Midway Ky
Mark Johnson	119 E Stephens Street
Wm Rife	306 North Brand St.
Blythe Hillland	Midway College
Mary + David Todd	950 Northwinter St. Midway Ky, 40347



MIDWAY THANKS YOU!

NAME

ADDRESS

Wanda Kennedy P.O. Box 395 Midway, Ky 40347

Sumita White P.O. Box 4366 Midway, Ky 40347

Ralph Swinford Lexington Ky.

Yount's Tavern PO Box 4047 Midway Ky 40347

Ray & Linda Papp PO Box 684 Midway Ky 40347

Donald & Betty Workman P.O. Box 4007 Midway, Ky 40347

Joe Washburne P.O. Box 407 MIDWAY Ky 40347

Virginia Stone P.O. Box 4214 Midway Ky 40347

Brenda Piatt Midway Ky 40347

Ann Roller PO Box 3872 Midway Ky 40347

Cindy Chadwell PO Box 3865 Midway Ky 40347

Suzie Foley 233 Johnson St Midway 40347

Suzi Swemakers PO Box 4404 " " "

Sherman Columbia 105 Oak St Midway 40347

Scott Ferguson

LANAR Hewitt

Van Ky

Joyce Carpenter

Midway Ky.

 **THANK
YOU!****MIDWAY THANKS YOU!**

NAME

ADDRESS

Mary Grabbard	313 N. Winter St. Midway Ky 40347
Liam Gallagher	922 N Winter Ct Midway Ky 40347
Glenn & Lisa Little	105 Coach Station Pl. Midway, Ky 40347
Larry D. Rogers	4243 Ironworks Rd Georgetown Ky 4032
Virginia Ragan	116 W. Bruce St. Midway, Ky 40347
Dwayne Grabbard	313 N. Winter St. Midway Ky 40347
George Weston	73 Circle Drive Midway Ky 40347
Vic Sparks	113 Martin St. 40347
Jeff Humphrey	121 Cottage Garden Ln. 40347
Marianne Englund	512 E. Stephens St 40347
Michael Guller	110 Creekside Drive 40324
J. Wallis	2210 Grassy Springs Rd 40383
Best Butler	Woodlake Rd Midway
Jany Mithun	109 Cottage Grove 40347
Eddie & Connie Portwood	115 Highway 40347
Gay-Mike Trent	313 N. Winter St. Ky 40347
Ronnie Bell	1231-CAN-RUN-ROAD 40324
Audrey and Spencer Wall	464 Elkton Place



MIDWAY THANKS YOU!

NAME

ADDRESS

SUSAN Borland P.O. Box 4124 Midway Ky

Hazel Columbia P.O. Box Midway Ky. 40347

Marlene Riddle P.O. Box 208 - 211 Gayland

John W. McDaniel III

P.O. Box 3875

126 West STEPHENS STREET Midway, Ky 40347

Rhonda Hudson

P.O. Box 4103 377 Weisenburger Mill

Scott & Stephanie Barron

122 Cottage Garden Lane Midway, KY

BA Berney

4100 Old Frankfurt Pike hex Ky 4051

Ann Mayes

P.O. Box 3809 Midway Ky 40347

Allen Lever

P.O. Box 755 Midway Ky 40347

Paul W. Maultz

P.O. Box 904; 118 W. Main MIDWAY

Audrey Daniels

P.O. Box 4422 Midway Ky 40347

Angie Dawson

115 Coach Station Rd Midway 40349

Rhonda Spencer

Box 558 midway Ky

Alison Craig

Box 4221 Midway Ky Thank you! ♥

Bob Hume

767

Midway

Joel Evans

310 S. Winter Midway

Kennetha Darneal

252 W. Stephens St. Midway



MIDWAY THANKS YOU!

NAME

ADDRESS

Al Bailey P.O. Box 3876 Midway Ky 40347

John Moore 113 N. Winter St. Midway, Ky. 40347

Larry Schaffner 119 GRATZ ST. Midway Ky 40347

Eleanor Gifford P.O. Box 3826 Midway, Ky

Eric Bailey P.O. Box 3876 MIDWAY, KY 40347

Molly Yandell 133 Carriage Ln Midway Ky 40347

JP Hayes 142 Carriage Lane Midway KY 40347

Maudie & Quess 109 COACH STATION Midway, Ky

Sherry & Andy Shivers 218 Cottage Grove Midway, Ky. 40347

Tom & Jim Kypin 112 Old Town Midway Ky 40347

Mark Yate 162 COTTAGE GARDEN LN MIDWAY KY 40347

Lee DeVosier 125 Carriage Ln Midway KY 40347

Deane Shepard 100 Cottage Garden Midway Ky 40347

Rusty & Angie Dawson 115 Coach Station Rd. Midway, Ky 40347

Alex & Amanda Hunter 164 Cottage Garden Midway 40347

Tom & Wendy Parker 202 Carriage Lnct Midway 40347

Sansette Morgan 102 Towne Walk Ct Midway 40347



THANK YOU

Kentucky Utilities

ADDRESS

Cornelia Eubington	119 W Main St Midway Ky.
JAMES TANGOTT	308 2nd St Midway Ky.
The Hokansons	106 Cottage Grove Midway KY
Sherby Hume	3775 Old Frankfort Pike
ARLENE & JOHN WELLS	P.O. BOX 3952 - MIDWAY 40347
Michelle Smith	2162 W. Stephens St
Sharon Starnes	231 W Higgins
Judy Hayes	251 W. Higgins



MIDWAY THANKS YOU!

NAME

ADDRESS

Beck, Marie	113 N. Winter
Bu Van Saff	113 N WINTER CT
Gene & Mat Gray	345 North Ridge Drive
Jim & Gene McLean	421 Mill Rd Place
Ed & Chickensan	129 West Brien St.
Glynn Fusco	114 N. Winter Ct.
Kyle & Ed Salas	122 W. main Street.
Lisa Savage	200 Warfield
Smida Lee	109 ALAMS Lane
Myra Lewis Prewitt	219 Gayland Drive.
J P HARRIS	594 MOORES Mill
Jessica Presley	114 N. Winter Ct. Midway, KY
Sally Kinnard	Box 732 Midway, Ky
Jackie Jones	P.O. Box 4101, Midway Ky 40347
Dancey Benson	P.O. Box 4216 Midway 40347
Timmy Campbell	413 Mill Road Place Midway 40347
Gold Grady	406 Mill Rd. Place Midway Ky 40347



MIDWAY THANKS YOU!

Kentucky Utilities

NAME

ADDRESS

<i>Lizanne Glass</i>	<i>402 71st Rd Place</i>
<i>Chuck Logan</i>	<i>1210 E. NIGGINS ST.</i>
<i>Michael Blower</i>	<i>411 Hill Rd Pl.</i>
<i>Barbara Reynolds</i>	<i>108 Oak St. Midway</i>
<i>Sharon Turner</i>	<i>113 E. Higgins St. Midway</i>
<i>Dissy Digley</i>	<i>1758 Big Sink Versailles</i>
<i>Doris Logan</i>	<i>136 E Main Midway</i>
<i>Doris Logan</i>	<i>108 Highview Dr.</i>
<i>Wesley Kenda</i>	<i>315 Forest Dr. Lanesburg Ky 40342</i>
<i>Bill Homan</i>	<i>328 S. Winter St. Midway</i>
<i>Teddy & Penny Brathorn</i>	<i>1621 Monroes Mill Midway 40347</i>
<i>Bill van den Dool</i>	<i>595 Thores Hill Midway K</i>
<i>George & Hilda</i>	<i>39 21st Hill</i>
<i>Joe Hunk</i>	<i>128 E. Main</i>
<i>Diana & Pete Woodroof</i>	<i>209 S. Winter</i>
	<i>108 E Main</i>
<i>Helen Garna</i>	<i>115 Walnut St.</i>
<i>Lisa & Odell Farler</i>	<i>337 2nd St. "</i>



MIDWAY THANKS YOU!

NAME

ADDRESS

Jean A. Sharon	301 W. Stephens - Midway Ky.
L M Sharon	301 W. STEPHENS MIDWAY KY
Helen B. Clifton	101 Oak St. Midway, Ky.
Helen Reuter	Midway Ky.
Edgar & Les Ginter	3527 Old Louisville Versailles Ky
Doris B. Nane	408 S. Winter - Midway Ky.
L M Sharon	301 WEST STEPHENS MIDWAY K
Carl A. Pollock	405 MERRYWOOD DR. Midway, Ky
Spencer & Martha Craig	111 Oak St. Midway Ky.
Deen Craig	104 OAK ST. Midway Ky.

Electronic Storm Pictures